

What is claimed is:

1. A fixing device comprising:

pressing/transferring means pressing, when a primary transfer toner image produced by transferring a toner image from a photoconductive element to a first image transfer body is to be transferred to a second image transfer body by secondary image transfer, said second image transfer body against said first image transfer body;

heat-fixing means for heating said second image transfer body after the secondary image transfer to thereby fix a secondary transfer image on said second image transfer body;

press-fixing means for pressing second image transfer body against said heat-pressing means; and

conveying means for conveying said second image transfer body from a nip for secondary image transfer between said first image transfer body and said pressing/transferring means to a nip for fixation between said heat-fixing means and said press-fixing means.

2. The device as claimed in claim 1, wherein said conveying means comprises an endless belt movable from the nip for secondary image transfer to the nip for fixation.

3. The device as claimed in claim 2, wherein said conveying means further comprises attracting means for

electrostatically retaining said second image transfer body on said endless belt.

4. The device as claimed in claim 3, wherein said conveying means further comprises attraction canceling means for canceling electrostatic attraction acting on said second image transfer body.

5. An image forming apparatus comprising:

first image transferring means for transferring a toner image formed on a photoconductive element to a first image transfer body one time or a plurality of times by primary image transfer;

second image transferring device for transferring a primary transfer toner image transferred to said first image transfer body by said first image transferring means to a second image transfer body by secondary image transfer;

fixing means for fixing a secondary transfer toner image transferred to said second image transfer body by said second image transferring device; and

conveying means for conveying said second image transfer body from said second image transferring means to said fixing means.

6. The apparatus as claimed in claim 5, wherein said conveying means comprises an endless belt movable from a nip for the secondary image transfer to a nip for fixation.

7. The apparatus as claimed in claim 6, wherein said conveying means further comprises bias applying means for applying a bias, which is opposite in polarity to a bias applied to said first image transfer body for the secondary image transfer, to said endless belt.

8. The apparatus as claimed in claim 7, wherein said bias applying means applies the bias to said endless belt at the same time as the bias for the secondary image transfer is applied to said first image transfer body for thereby assisting said secondary image transfer.

9. The apparatus as claimed in claim 7, further comprising fixing bias applying means for applying a bias, which is opposite in polarity to the bias applied by said bias applying means, to said endless belt conveying said second image transfer body after fixation.

10. The apparatus as claimed in claim 7, further comprising grounding means for grounding said endless belt.

11. A color image forming apparatus comprising:  
toner image forming means for forming, in accordance with image data, a toner image of a particular color on each of a plurality of photoconductive elements;  
image transferring means for sequentially transferring toner images of different colors formed on said plurality of photoconductive elements to a first

image transfer body one above the other by primary image transfer to thereby complete a primary transfer toner image; and

transferring/fixing means for transferring the primary transfer toner image to a second image transfer body by secondary image transfer and fixing said secondary transfer toner image on said second image transfer body, said transferring/fixing means comprising an endless belt configured to convey said secondary image transfer body from a nip for the secondary image transfer to a nip for fixation.

12. The apparatus as claimed in claim 11, wherein said transferring/fixing means comprises a plurality of rollers including a first roller facing either one of a fixing roller, which fixes the secondary transfer toner image on said second image transfer body and a fixing belt passed over a plurality of rollers, and a second roller facing said first image transfer body, and said endless belt is passed over said plurality of rollers.

13. The apparatus as claimed in claim 12, further comprising bias applying means for applying a bias, which is opposite in polarity to a bias for the secondary image transfer applied to said first image transfer body, to said second roller.

14. The apparatus as claimed in claim 13, wherein

said bias applying means applies the bias at the same time as the bias for the secondary image transfer is applied to said first image transfer body for thereby assisting the secondary image transfer.

15. The apparatus as claimed in claim 13, further comprising:

fixing bias applying means for applying a bias, which is opposite in polarity to the bias applied by said bias applying means, to said first roller; and

grounding means for grounding said endless belt in contact with said endless belt.

16. The apparatus as claimed in claim 13, further comprising grounding means for grounding said endless belt in contact with said endless belt.

17. The apparatus as claimed in claim 16, wherein said endless belt is passed over a plurality of rollers including said first roller, said second roller and a third roller positioned downstream of said first roller in a direction of conveyance.

18. The apparatus as claimed in claim 17, further comprising endless belt heating means for heating said endless belt.

19. The apparatus as claimed in claim 12, further comprising moving means for causing said endless belt and said first image transfer body to selectively contact each

other.

20. The apparatus as claimed in claim 12, wherein said fixing roller accommodates internal heating means therein.

21. The apparatus as claimed in claim 12, further comprising at least one of internal heating means disposed in any one of said plurality of rollers and external heating means positioned outside of the one roller.

22. The apparatus as claimed in claim 12, wherein said first roller consists of two divided rollers facing either one of said fixing roller and said fixing belt while said second roller consists of two divided rollers facing said first image transfer body.

23. A color image forming apparatus comprising:  
toner image forming means for sequentially forming, in accordance with image data, color toner images on a photoconductive element with toners of four different colors;

image transferring means for sequentially transferring the color toner images from said photoconductive element to a first image transfer body one above the other by primary image transfer to thereby complete a primary transfer toner image; and

transferring/fixing means for transferring the primary transfer toner image to a second image transfer

body by secondary image transfer and fixing a secondary transfer toner image on said second image transfer body, said transferring/fixing means comprising an endless belt configured to convey said second image transfer body from a nip for the secondary image transfer to a nip for fixation.

24. The apparatus as claimed in claim 23, wherein said transferring/fixing means comprises a plurality of rollers including a first roller facing either one of a fixing roller, which fixes the secondary transfer toner image on said second image transfer body and a fixing belt passed over a plurality of rollers, and a second roller facing said first image transfer body, and said endless belt is passed over said plurality of rollers.

25. The apparatus as claimed in claim 24, further comprising bias applying means for applying a bias, which is opposite in polarity to a bias for the secondary image transfer applied to said first image transfer body, to said second roller.

26. The apparatus as claimed in claim 25, wherein said bias applying means applies the bias at the same time as the bias for the secondary image transfer is applied to said first image transfer body for thereby assisting the secondary image transfer.

27. The apparatus as claimed in claim 25, further

comprising:

fixing bias applying means for applying a bias, which is opposite in polarity to the bias applied by said bias applying means, to said first roller; and

grounding means for grounding said endless belt in contact with said endless belt.

28. The apparatus as claimed in claim 25, further comprising grounding means for grounding said endless belt in contact with said endless belt.

29. The apparatus as claimed in claim 28, wherein said endless belt is passed over a plurality of rollers including said first roller, said second roller and a third roller positioned downstream of said first roller in a direction of conveyance.

30. The apparatus as claimed in claim 29, further comprising endless belt heating means for heating said endless belt.

31. The apparatus as claimed in claim 24, further comprising moving means for causing said endless belt and said first image transfer body to selectively contact each other.

32. The apparatus as claimed in claim 24, wherein said fixing roller accommodates internal heating means therein.

33. The apparatus as claimed in claim 24, further

comprising at least one of internal heating means disposed in any one of said plurality of rollers and external heating means positioned outside of the one roller.

34. The apparatus as claimed in claim 24, wherein said first roller consists of two divided rollers facing either one of said fixing roller and said fixing belt while said second roller consists of two divided rollers facing said first image transfer body.